

Application No. 10/054,741
Amendment "C" dated July 29, 2005
Reply to Office Action mailed May 5, 2005

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A mobile communication system including a plurality of base stations, a network control station conceptually located above said plurality of base stations and mobile stations receiving signals from said plurality of base stations, said mobile communication system characterized by comprising in that:

quality control means coupled to said network control station and communicating with the mobile stations;

wherein said mobile station notifies said quality control means of a downlink receiving quality desired by the mobile station and the location of the mobile station,

said quality control means determines to which base stations the mobile station is to be connected in order to satisfy the [[a]] downlink receiving quality desired by the mobile station and notifies said network control station of the desired base stations to which the mobile station is to be connected,

said network control station transmits a duplicated information signal to said desired base stations in order to allow a mobile station to simultaneously communicate with at least two base stations, and

said mobile station further receives and synthesizes signals transmitted by the plurality of base stations to control the downlink receiving quality.

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Claims 2-4. (Cancelled).

5. (Currently Amended) The mobile communication system according to claim 1 ~~[[3]]~~, characterized in that:

said mobile station notifies ~~has means for notifying~~, before transmitting information, said quality control means of a desired uplink receiving quality received by base stations and/or a transmittable maximum power of the mobile station and/or the location of the mobile station,

said quality control means has means for identifying base stations to which said mobile station is to be connected in order to satisfy the desired uplink receiving quality in such a manner that the transmittable maximum power of said mobile station is not exceeded and means for requesting the base stations and said network control station to receive and synthesize a signal from said mobile station and designating transmission power that is to be used by said mobile station, and

said mobile station transmits information using said designated transmission power, and the network control section synthesizes signals received by the base stations to control the uplink receiving quality.

6. (Currently Amended) The mobile communication system according to claim 1 ~~[[3]]~~, characterized in that:

said quality control means has means for measuring traffic in cells surrounding a cell in which said mobile station is present and means for requesting the network control station to transmit a duplicate signal to one or more stations, if any, which have a lower measured traffic

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and which can transmit information to said mobile station communicating in an adjacent cell,
and

said mobile station receives and synthesizes signals from base stations that have been communicating with the mobile station and from the one or more base stations, thereby improving the downlink receiving quality.

7. (Currently Amended) A receiving quality control method for a mobile communication system having a plurality of base stations, a network control station conceptually located above said plurality of base stations and mobile stations receiving signals from said plurality of base stations, the method being characterized in that:

said mobile station notifies quality control means, which is coupled to said network control station and communicates with the mobile stations, of a downlink receiving quality desired by the mobile station and the location of the mobile station,

said quality control means ~~said mobile station~~ determines to which base stations the mobile station is to be connected in order to satisfy ~~[[a]]~~ the downlink receiving quality ~~desired~~ by the mobile station and notifies the network control station of the desired base stations to which the mobile station is to be connected,

said network control station transmits a duplicated information signal to said desired base stations in order to allow a mobile station to simultaneously communicate with at least two base stations, and

said mobile station further receives and synthesizes signals transmitted by the plurality of base stations to control the downlink receiving quality.

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Claims 8-10. (Cancelled).

11. (Currently Amended) The receiving quality control method according to claim 7 ~~[[9]]~~, characterized in that:

before transmitting information, said mobile station notifies said quality control means of a desired uplink receiving quality received by base stations and/or a transmittable maximum power of the mobile station and/or the location of the mobile station,

said quality control means identifies base stations to which said mobile station is to be connected in order to satisfy the desired uplink receiving quality in such a manner that the transmittable maximum power of said mobile station is not exceeded, requests the base stations and said network control station to receive and synthesize a signal from the mobile station, and designates transmission power that is to be used by said mobile station, and

said mobile station transmits information using the designated transmission power, and said network control section synthesizes signals received by the base stations to control the uplink receiving quality.

12. (Currently Amended) The receiving quality control method according to claim 7 ~~[[9]]~~, characterized in that:

said quality control means measures traffic in cells surrounding a cell in which said mobile station is present, and requests said network control station to transmit a duplicate signal to one or more base stations, if any, which have a lower measured traffic and which can transmit information to said mobile station communicating in an adjacent cell, and

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said mobile station receives and synthesizes signals from base stations that have been communicating with the mobile station and from the one or more base stations, thereby improving the downlink receiving quality.

13. (Currently Amended) A recording medium having a receiving quality control program for a mobile communication system recorded therein, the mobile communication system having a plurality of base stations, a network control station conceptually located above said plurality of base stations and mobile stations receiving signals from said plurality of base stations, the recording medium being characterized in that said program allows execution of steps of:

in said mobile station notifying quality control means, which is coupled to said network control station and communicates with the mobile stations, of a downlink receiving quality desired by the mobile stations and the location of the mobile station;

in said quality control means ~~in said mobile station~~ determining to which base stations the mobile station is to be connected in order to satisfy ~~[[a]]~~ the downlink receiving quality desired by the mobile station and notifying said network control station of the desired base stations to which the mobile station is to be connected;

in said network control station transmitting a duplicated information signal to said desired base stations in order to allow a mobile station to simultaneously communicate with at least base stations; and

in said mobile station further receiving and synthesizing signals transmitted by the plurality of base stations to control the downlink receiving quality.

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Claim 14. (Cancelled).